28 - DTC-Based Diagnostics / MODULE, Transmission Control (TCM), 8HP45/845RE / Diagnosis and Testing

P1DCF-00-TCM MONITORING PROCESSOR PERFORMANCE UNALLOWED PARK ENGAGEMENT DO TO ABS FAILURE

For a complete wiring diagram, **refer to the Wiring Information**.

Theory of Operation

The Transmission Control Module (TCM) monitors the pressure regulator and solenoid logic to detect a failure in the activation of the pressure regulators and solenoids. The pressure regulators are used to control the pressure to the clutches and the solenoids are used to activate the pressure to the parking lock and to the position valve. The commanded currents of all regulators and solenoids are monitored. The monitoring consists of several diagnostic strategies:

- Transmission blocking (Multiple clutches locked up)
- Wrong driving direction (Incorrect driving direction)
- Gear engagement of Reverse gear while driving forward (Unallowed Reverse engagement)
- Unwanted engaging or disengaging of Parking Lock (Unallowed Park engagement)

When Monitored and Set Conditions

When Monitored: This diagnostic runs continuously when the following conditions are met:

- Limp home mode is not active.
- Position valve monitoring is not active.
- Vehicle speed signal is not valid.

Set Conditions:

- The solenoid valve for the park lock is deactivated for greater than a calibrated amount of time.

Possible Causes
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC TROUBLE CODES (DTCS)
TRANSMISSION CONTROL MODULE ASSEMBLY (TCMA)
TRANSMISSION CONTROL MODULE (TCM)

Always perform the PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. **(Refer to 28 - Diagnostic Trouble Code (DTC) -Based Diagnostics/MODULE, Transmission Control (TCM)/Standard Procedure)**.

CHECK FOR ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC TROUBLE CODES (DTCS)

1. With the scan tool, read ABS DTCs.

Are any ABS DTCs set?

Yes

- Repair ABS DTCS. (Refer to 28 - DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Diagnosis and Testing).

No

- Using the schematics as a guide, check the Transmission Control Module (TCM) connector and all related in-line connector terminals for corrosion, damage, or pushed out terminals. Pay particular attention to the power and ground circuits. If no problems are found, replace and program the TCM in accordance with the Service Information. (Refer to 21 - Transmission and Transfer Case/Automatic - 8HP45/845RE/VALVE BODY/Removal) .
- Perform the TRANSMISSION VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Transmission Control (TCM) - Standard Procedure).